

Docket No.: ST 2622.02 US
Serial No.: 09/650,969

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REMARKS

I. Status

In the Office Action mailed September 5, 2003, the Examiner noted that claims 1-44 were pending and rejected claims 1-44. The applicant respectfully traverses the rejection. No new matter has been added.

II. Rejection of claims under 35 U.S.C. § 112, 2nd paragraph

Claims 1-29 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter applicant regards as the invention. The objection is respectfully traversed.

The proper standard for determining whether a claim is indefinite has been set by statute and the courts. Section 112, second paragraph states: "The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention". The primary purpose of the definiteness requirement is to ensure that the claims are written in such a way that they give notice to the public of the extent of the legal protection afforded by the patent, so that interested members of the public, e.g., competitors of the patent owner, can determine whether or not they infringe. *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S., 28-29 (1997). "Only after a thorough attempt to understand the meaning of a claim has failed to resolve material ambiguities can one conclude that the claim is invalid for indefiniteness." *All Dental Prodx, LLC and DMG Dental-Material Gesellschaft MBH v. Advantage Dental Products, Inc.*, 309 F.3d 774, 780 (Fed. Cir. 2002). It is not necessary that a claim recite each and every element needed for the practical utilization of the claimed subject matter and it is entirely appropriate, and consistent with section 112 to present claims to only one aspect of the invention. *Carl Zeiss Stiftung v. Renishaw PLC*, 945

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F.2d 1173, 1181 (Fed. Cir. 1991).

The Examiner has rejected claims 1, 9, and 20 alleging that the preamble fails to limit the invention by stating "a near field apparatus", thus rendering the claims overly broad and indefinite. The Examiner has rejected claims 1, 9, and 20 because of a "single means claims", alleging this makes the claims overly broad and indefinite. The Examiner has rejected claims 1, 9, 19 and 20 alleging that the claim recites "a conductive plane/layer with an aperture" without other supporting structure, thus rendering the claims overly broad and indefinite.

The Applicants respectfully traverse these rejections.

The Applicants have chosen language which particularly points out and distinctly claims the applicants' invention.

For example, claim 1 recites a conductive layer defining an aperture therein. The aperture has a perimeter. The conductive layer has at least one protrusion extending into the aperture at the perimeter. As another example, claim 9 recites a light source and a conductive plane proximate to the light source. The conductive plane has an aperture therein positioned such that light from the light source passes through the aperture. The conductive plane includes at least one protrusion which extends into the aperture. Further as to claim 9, the specification states that "It should be kept in mind, however, that a VCSEL device is merely one preferred embodiment of the invention, and the edge emitting and other solid state lasers, as well as other light sources generally, may be used with the invention." (page 43, lines 2-6). Thus, the Applicants have chosen language to clearly define their claims.

As it states in M.P.E.P. 2173.04 and Federal case law, breadth of a claim is not to be equated with indefiniteness. If the scope of the subject matter embraced by the claim is clear (metes and bounds), and if the applicant has not otherwise indicated that he intends the invention to be of a different scope, then the claim complies with the second paragraph of 35 U.S.C. 112. If the enabling disclosure of the specification is not commensurate in scope with the subject

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matter encompassed by a claim, that fact does not render the claim imprecise or indefinite or otherwise not in compliance with the second paragraph of 35 U.S.C. 112. *In re Borkowski*, 422 F.2d 904, 164 USPQ 642 (CCPA 1970)."

In claims 1, 9, 19 and 20, the Applicants have chosen the scope of the subject matter and have recited claims which ensures this scope is clear to the public who are informed of its boundaries. The Applicants have carefully chosen the form of expression of the claims and there is no legal requirement for a "single means" claim or of a "preamble". As stated above in the case law, it is allowable to present only one aspect of an invention and not recite every element for the practical utilization of the subject matter. *Renishaw* at 1173. Thus, the Applicants have met the standard of 35 U.S.C. 112, 2nd paragraph.

Generally, the scope of a claim will be considered definite where each recited limitation is definite. *In re Wakefield*, 422 F.2d 897, 164 USPQ 636 (CCPA 1970). A claim may not be rejected solely because of the type of language used to define the subject matter for which patent protection is sought. *In re Swinehart*, 439 F.2d 210, 160 USPQ 226 (CCPA 1971). The Applicants have chosen claim language so that each recited limitation is definite; hence the Applicants have met the standard of 35 U.S.C. 112, 2nd paragraph.

III. Rejection of claims 1-31 and 44 under 35 U.S.C. § 103(a)

Claims 1-29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shin et al. (U.S. Patent No. 5,753,941) in view of Sun et al. (U.S. Patent No. 5,915,165) and Claisse et al. (U.S. Patent No. 6,084,900). Applicants respectfully traverse the rejections for the following reasons.

As to claims 1 and 9, the Examiner alleges that Shin et al. shows in Figure 2, a device comprising a conductive layer (40) with an aperture (46). The Examiner admits Shin et al. does not teach a protrusion in this aperture. However the Examiner cites Sun et al. for teaching in Figure 6 the multiple

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aperture shapes (which does not exclude protrusions). The Examiner then states that it would have been obvious to one of ordinary skill in the art at the time of the invention to alter the aperture shape in Shin et al., as taught by Sun et al., to limit the light emission to a particular mode. Further the Examiner claims that Claisse et al. teaches in column 5, lines 5-30 that the aperture size affects the mode output.

The Examiner alleges that Figure 2 of Shin et al. discloses a device comprising a conductive layer (40) with an aperture (46). The Applicants respectfully disagree. The said disclosure actually shows an electrode layer 40 formed on a second reflector layer 36 and having a cavity 46 for emitting light of the second reflector layer. (column 2, line 61; column 2, line 66, column 3, line 21, column 4, lines 9-11). In contrast, the present invention recites a "conductive layer" (not an electrode layer) defining an "aperture" (not a cavity formed in a semiconductor material). Therefore, the reference Shin et al. does not disclose the elements of the present invention.

The Examiner admits that Shin et al. does not disclose a "protrusion" and thus cites Sun et al. as allegedly showing a "protrusion".

The relevant section of Sun et al. referred to by the Examiner is the embodiment of a VCSEL shown in Figure 4. The VCSEL shown in Figure 4 has a lower DBG mirror 102 and an upper DBG mirror 116. In between these mirrors there is a group of active region layers 110, 112, 114 and a group of impurity doped disordering layers 104, 106, 108. (column 3, lines 49-67 to column 4, line 13).

In Figure 4, there is an aperture 134 (not labeled in picture) defined by the intermixed region 122 which is smooth in shape. (column 5, lines 23-24). The intermixed region 122 is a semiconductor having aluminum and gallium. (column 4, lines 54-63). The anisotropic apertures 136, 138, and 140 are different shapes of the aperture 134 may assume. (column 5, lines 23-39).

However, Sun et al. does not show a "protrusion" extending into the "aperture" of a "conductive layer" as recited in the present invention. Rather, Sun et al. discloses, as explained above, an intermixed region 122 which can

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have various shapes 136, 138, and 140. Thus, Sun et al. does not show a "protrusion" as recited in the prior art. Since the prior art does not show the elements of the invention, for example, "conductive layer", "aperture", and "protrusion", the Examiner has not established an a priori case for obviousness. " If examination at the initial stage does not produce a prima facie case of unpatentability, then without more the applicant is entitled to grant of the patent." In re Oetliker, 977 F.3d 1443 (Fed. Cir. 1992).

Assuming, in argument only, that the elements had been disclosed, the Applicants maintain that Shin et al. and Sun et al. still cannot be combined to render obvious the present invention according to motivation from Claisse et al. According to the Examiner's argument, an inventor of skill in the art would alter the cavity 46 as taught by the shapes of Figure 6 of Sun et al. in order to limit the light emission to a particular mode as taught by Claisse et al. The Applicant respectfully disagrees. Claisse et al. is showing how to vary central etched structure regions 51, 61, and 71 in order to create structures which emit light at different wavelengths (mode orders lase at different wavelengths). However, the Examiner has not shown how altering the cavity 46 of Shin et al. sandwiched between two electrodes or adding a protrusion would change the wavelength of the device of Shin et al. It would appear this would merely reduce the intensity of light emitted. Thus, it simply doesn't make sense to combine these references.

As to independent claims 19, 20, and 30, the claims are patentable for the same reason as independent claims 1 and 9. Claims 19 and 30 recite an "emission facet" having an "aperture therein". Claim 20 recites "said aperture including a plurality of spaced apart slots".

Therefore, the present invention recited in independent claims 1, 9, 19, 20, and 30, and consequently all depending claims is not rendered obvious by the cited prior art.

IV. Rejection of claims 37-43 under 35 U.S.C. § 103(a)

Claims 37-43 stand rejected under 35 U.S.C. § 103(a) as being

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unpatentable over Shin et al. (U.S. Patent No. 5,753,941) in view of Claisse et al. (U.S. Patent No. 6,084,900).

Regarding independent claim 37, the Examiner alleges that Shin et al. discloses an active region (34), a first reflective region (36), a second reflective region (32), and an emission facet on the first reflective region (36) with aperture (46). The Examiner respectfully traverses this rejection because Shin et al. does not show an "emission facet" on the first reflective region (36). But rather, Sun et al. shows "[t]he electrode layer 40 is formed with a cavity 46 for emitting light transmitted from the second reflector layer 36". (column 3, lines 5-6). Thus, Sun et al. is simply silent as to any "emission facet" and emits light directly through the reflective layer 36. Thus, the "emission facet" not having been shown, the Examiner has not established an a priori case for obviousness. "If examination at the initial stage does not produce a prima facie case of unpatentability, then without more the applicant is entitled to grant of the patent." *In re Oetiker*, 977 F.3d 1443 (Fed. Cir. 1992).

Therefore, the present invention recited in Independent claim 37 and dependent claims 38-44 is not rendered obvious by the cited prior art.

V. Dependent Claims

The argument and evidence set forth above is equally applicable here. Since the independent Claims 1, 9, 19, 20, 30 and 37 are allowable, then the dependent Claims 2-8, 10-18, 22-29, 31-36 and 38-44 must also be allowable. If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed.Cir. 1988).

VI. Concluding Matters

In view of the foregoing remarks and amendments, it is respectfully submitted that each of the claims distinguishes over the prior art, and therefore, defines allowable subject matter. A prompt and favorable reconsideration of the rejection along with an indication of allowance of all the pending claims is

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Respectfully requested.

Should there be any remaining questions to correct format matters, it is urged that the Examiner contact the undersigned attorney with a telephone interview to expedite and complete prosecution.

If any further fees are required in connection with the filing of this response, please charge same to our Deposit Account No. 04-1175.

Respectfully submitted,

DISCOVISION ASSOCIATES



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